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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,399	08/16/2001	Guru V. Betageri	WESTU1.001A	3889

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EXAMINER	
KISHORE, GOLLAMUDI S	
ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 09/24/2003 17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/931,399	Applicant(s) Betageri
	Examiner Gollamudi Kishore	Art Unit 1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jul 14, 2003* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *13-40* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *13-40* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

The request for the extension of time, filing under 1.114, preliminary amendment and declaration, all filed on 7-14-03 are acknowledged.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

2. Claim 38 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. .

The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in In re Wands, 8 USPQ2d, 1400 (Fed.Cir.1988). Among these factors are: (1) the nature of the invention; 2) the state of the prior art; 3) the relative skill of those in the art; 4) the predictability or unpredictability of the art; 5) the breadth of the claims; 6) the amount of direction or guidance presented; 7) the presence or absence of working examples; and 8) the quantity of experimentation necessary. When the above factors are weighed, it is the

examiner's position that one skilled in the art could not practice the invention without undue experimentation.

1) the nature of the invention: the invention concerns with a pro-liposomal formulation with an enteric coating and encapsulating the composition in a capsule.

2)The state of the prior art: the state of the prior art is very high in terms of formulating the liposomal sustained release compositions and treating various disease states, but not preventing disease states.

3) the relative skill of those in the art: the skill of one of ordinary skill in the art is very high (Ph.D level technology).

4) the predictability or unpredictability in the art: while there is general predictability in formulating the liposomal or proliposomal formulations, there is unpredictability in the art of preventing disease states such as AIDS, cancer and others.

5). the breadth of the claims: instant claim is very very broad in terms of the active agents and the disease to be prevented. Said claim does not recite any specific active agent and the specific disease to be prevented.

6) the amount of direction of guidance provided: instant specification provides no guidance at all in terms of preventing diseases states.

7) the presence or absence of working examples: as pointed out above, there are a variety of diseases states such as AIDS and cancer and instant specification provides no working

examples as to how the diseases can be prevented using the claimed formulation. what is provided in the specification is a method of making the formulation only.

8) the quantity of experimentation necessary: since the claim does not recite any specific active agent and any specific disease state, it is difficult for one of ordinary skill in the art to choose the proper active agent and prevent a disease without undue experimentation.

3. Claims 13-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 is drawn to a method of making and therefore, the step of combining the active agent with the phospholipid should be recited completely in the claim. This is essential since an active agent can be lipophilic (such as steroids) or hydrophilic (such as enzymes, proteins and other compounds) while phospholipids are lipophilic; the hydrophilic active agents do not dissolve in the same solvent as the phospholipids.

Claims 23 and 34 recite bacteria, microbes and viral agents as active agents; it is unclear as to how these can be active agents since they themselves cause diseases.

Claim 24 recites combining the active agent and the phospholipid in a non-aqueous solvent. It is unclear as to what this non aqueous solvent is; this is essential in view of the dependent claim 34 reciting several hydrophilic agents which do not dissolve in non-aqueous solvents.

It is unclear as to what the active agent is or what disease is treated or prevented or diagnosed as recited in claim 38.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> **A person shall be entitled to a patent unless -**
>
> **(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.**

5. Claims 13-23 and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Desai (5,206,219).

Desai discloses enteric formulations containing an active agent and a phospholipid and methods of making the preparation in the form of either capsules or tablets. The active agents include hormones, enzymes, interferon and cyclosporin. The phospholipids taught are DMPC and egg lecithin (note the abstract, col. 2, lines 54-62; col. 5, line 56 through col. 6, line 17; Examples and claims).

Applicant's arguments have been fully considered, but are not found to be persuasive. Applicant argues that Desai teaches the formation of microemulsion. This argument is not found to be persuasive since instant claims recite the combination of a phospholipid and the active agent which are enterically coated. Furthermore, applicant himself has not shown the formation of liposomes in the colon of the host after the composition is administered. Instant specification contains no data at all regarding this

aspect. The prior art thus, meets the requirements of instant claims. Applicant argues that Desai does not teach or suggest the enteric coating of the phospholipid. The examiner disagrees and points out col. 6, lines 5-7 where Desai teaches that alternately, the granules are enterically coated and packed into capsules. The granules contain phospholipid and instant claim language does not exclude the other components of Desai.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 13-23 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desai (5,206,219).

Desai discloses enteric formulations containing an active agent and a phospholipid and methods of making the preparation in the form of either capsules or tablets. The active agents include hormones, enzymes, interferon and cyclosporin. The phospholipids taught are DMPC and egg lecithin (note the abstract, col. 2, lines 54-62; col. 5, line 56 through col. 6, line 17; Examples and claims). As pointed out above, on col. 6, lines 5-7 Desai teaches the application of enteric coating on the granules before packing them in the capsules. Desai does not provide examples with regard to this embodiment; however, it is deemed obvious to one of ordinary skill in the art to provide an enteric coating on the composition containing phospholipid and the active agent itself instead of a coating on the packed

capsule with a reasonable expectation of success, based on the suggestion and guidance provided by Desai.

8. Claims 13-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganter (5,635,206) in combination with Desai cited above.

Ganter while disclosing proliposomal compositions teaches that a mixture suitable for the preparation of liposomes can be made by mixing lecithin (phospholipid), solubilizer(alcohol) and/or lipophilic and hydrophilic active agents and preparing a dry powders without the addition of water (note the abstract, col. 2, lines 4-59, examples and claims). What is lacking in Ganter is the coating of the proliposomal formulation with an enteric coating.

Desai as discussed above teaches compositions containing the active agent and phospholipid and coating of the composition with an enteric coating which is then packed into capsules or compressed into tablets. The purpose of enteric coating is to protect the composition in the stomach (col. 5, lines 5-7).

To coat the proliposome composition of Ganter with an enteric coating would have been obvious to one of ordinary skill in the art if the desired goal is to release the composition in the intestines since Desai teaches that enteric coating protects the composition in the stomach.

9. Claims 13, 16-24 and 27-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagame (4,615,885) in view of Desai cited above.

Nagakame discloses a method of preparation of lyophilized powders containing a phospholipid and the active agent and coating them with an enteric coating and the formulations are either in the form of tablets or capsules. The method of preparation of the powders involves dissolving the phospholipid and evaporating the organic solvent. Since the active agent is hydrophilic, an aqueous medium containing the active agent is added and the resultant mixture is lyophilized to prepare proliposomal powders (which upon contact with water form liposomes just as in instant case). In Nagakame the enteric coating is on the capsule containing the composition and not on the lyophilized powders of the compositions themselves.

Desai as discussed above teaches compositions containing the active agent and phospholipid and an enteric coating. The enteric coating can be either on the granular composition itself or on the capsules or tablets containing the composition. The purpose of enteric coating is to protect the composition in the stomach (col. 5, lines 5-7).

To coat lyophilized composition of Nagakame with an enteric coating instead of the capsules containing the composition would have been obvious to one of ordinary skill in the art since Desai teaches that the enteric coating can be used either directly on the granules or on the capsule containing the capsules and therefore, one of ordinary skill in the art would use either method if the desired goal is to release the composition in the intestines with a reasonable expectation of obtaining similar release in the intestines.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *G.S. Kishore* whose telephone number is (703) 308-2440.

The examiner can normally be reached on Monday-Thursday from 6:30 A.M. to 4:00 P.M. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, T.K. Page, can be reached on (703)308-2927. The fax phone number for this Group is (703)305-3592.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [thurman.page@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-1235.

Gollamudi S. Kishore, Ph. D

Primary Examiner

Group 1600

gsk

September 22, 2003